Approved For Release 2007/06/22 : CIA-RDP80-00810A005300650011-3

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CLASSIFICATION SECRET

CENTRAL INTELLIGENCE AGENCY REPORT

INFORMATION REPORT

CD NO.

COUNTRY East Germany

DATE DISTR. 19 November 1954

SUBJECT Technical Specifications of Products of VEB Kombinat Espenhain

NO. OF PAGES 4

PLACE ACQUIRED

NO. OF ENCLS. (LISTED BELOW)

25X1

DATE OF INFO

SUPPLEMENT TO REPORT NO.

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THIS IS UNEVALUATED INFORMATION

1. The following table lists the technical specifications of products produced by VEB Kombinat Espenhain during the first half of 1954. The enterprise was under SAG administration until 1 January 1954, when it was turned over to the Main Administration for Liquid Fuels in Production of the Chemistry of the East German Ministry for Heavy Industry.

2. In order to permit a comparison with the production under SAG administration, the average values for the second quarter of 1953 are also listed.

Item	Unit	Tech. Spec.	Average values 1st quarter 1954	2nd quarter 1954	2nd quarter 1953
Briquettes for sale					
Water	percent	Less than 18.0	14.90	14.92	14.79
Ashes	percent	Less than 14.0	13.66	13.35	14.23
Combustible material	percent	More than 68.0	71.44	71.73	71.05
Heating value	Kcal/kg	More than 4,500	4,785	4,820	4,718
Solidity (Germ.)	kg/sq.cm.	60 to 70	80.7	71.6	83.5
Specific gravity	g/cu.cm.		1.230	1.331	1.235
Distillation briquettes					
Water	percent	Less than 15.0	14.90	14.92	14.62
Ashes	percent	Less than 14.5	13.66	13.36	14.33
Combustible material	percent	More than 70.5	71.44	71.72	71.05
Elementary analysis of briquettes					
Carbon	percent	50 to 51	51.21	51.38	50.28
Hydrogen	percent	4 to 4.5	4.29	4.41	4.46
Sulfur	percent	2 to 3	2.19	2.10	2.05
Oxygen & nitrogen	percent	13 to 15	13.75	13.85	14.27

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Approved For Release 2007/06/22 : CIA-RDP80-00810A005300650011-3

25X

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Approved For Release 2007/06/22 : CIA-RDP80-00810A005300650011-3

Approved For Release 2007/06/22 : CIA-RDP80-00810A005300650011-3

Item	Unit	Tech. Spec. 1954	Average values 1st quarter 1954	2nd quarter 1954	2nd quarter 1953
Distillation analysis of briquettes					
Tar	percent	More than 13.5	14.10	14.42	14.56
Distillation water	percent	6.0 to 7.0	6.05	6.10	6.10
Coke	percent	More than 48.0	50.85	50.68	50.92
Gas & losses	percent	Less than 17.0	14.10	13.88	13.80
Humidity	percent	-	14.90	14.92	14.62
Volatile components in coke	percent	-	20.11	22.33	21.55
Solidity (warm)	kg/sq.cm.	60 to 70	80.7	71.6	83.5
Heating value	Kcal/kg	More than 4,600	4,785	4,820	4,718
Volatile sulfur	percent	-	2.19	2.10	2.05
Total sulfur	percent	-	4.07	3.95	3.64
Tar for sale					
Specific gravity at 50°Centrigrade	t/cu.m.	Less than 0.970	0.953	0.948	0.952
Dust content	percent	0.50	0.64	0.57	0.54
Solidifying point	Centigrade	-	37.6	37.0	37.7
Boiling up to 320° Centigrade	percent	28.0	29.6	31.8	27.8
Water content	percent	Less than 0.20	0.18	0.16	0.13
Light oil					
Specific gravity at 20°Centigrade	t/cu.m.	Less than 0.875	0.868	0.864	0.860
Water	vol.%	0.3	0.24	0.20	0.27
Combustion point	Centigrade	-	+2.0	+2.7	+0.5
Boiling up to 100°Centigrade	vol.%	4.0	4.0	3.8	4.27
Boiling up to 150°Centigrade	vol.%	29.0	29.0	29.0	28.8
Boiling up to 190°Centigrade	vol.%	-	58.0	57.7	55.6
End of boiling at 95°Centigrade	vol.%	240	239	249	239
Dry coke					
Water	percent	Less than 3.0	1.40	2.03	1.25
Ashes	percent	Less than 29.0	28.00	26.68	29.05
Combustible material	percent	Less than 69.0	70.60	71.28	69.70
Tar	percent	Less than 3.0	1.30	1.85	1.17
Volatile material	percent	Less than 15.0	15.00	15.09	13.2
Heating value	Kcal/kg	More than 5,500	5,739	5,765	5,659
Elementary Analysis of Dry Coke					
Carbon	percent	-	64.24	64.48	63.18
Hydrogen	percent	-	2.20	2.31	2.20
Sulfur	percent	-	1.13	1.16	1.23
Oxygen & nitrogen	percent	-	3.03	3.13	2.87
Sieve Analysis of Dry Coke					
Grain size 0 to 6 mm.	percent	90 to 97	94.1	95.5	96.05
Grain size 6 to 12mm.	percent	5. to 2.0	3.85	2.5	2.40
Over 12 mm.	percent	5 to 1.0	2.05	2.0	1.55
Sulfur					
H_2S in crude gas	g/normal cu.m.	-	31.1	30.5	31.06
H_2S in pure gas	g/normal cu.m.	-	8.3	5.6	4.86
H_2S in expulsion gas	g/normal cu.m.	-	59.6	67.93	54.1

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25X

Item	Unit	Tech. Spec. 1954	Average values 1st quarter 1954	2nd quarter 1954	2nd quarter 1953
Purity degree	percent	More than 99.9	99.92	99.92	99.92
Ashes	percent	Less than 0.01	0.007	0.006	0.009
Carbon	percent	Less than 0.02	0.014	0.012	0.012
Crude phenol					
Specific gravity at 20° Centigrade	t/cu.m.	1.060 to 1.070	1.068	1.070	1.064
Water	percent	16.0 to 17.0	16.2	15.6	16.8
Phenol content	percent	26.0 to 28.0	26.0	23.7	26.9
Kresol content	percent	30.0 to 35.0	30.5	29.2	30.5
Xylenol content	percent	15.0 to 18.0	16.0	19.2	19.0
Crude pyridine					
Specific gravity at 20°Centigrade	t/cu.m.	0.990 to 1.000	0.980	0.983	0.988
Boiling limit	Centigrade	100 to 200	104 to 215	101 to 219	102 to 200
Water	percent	Less than 9.0	7.2	9.07	6.6
Pure pyridine content	percent	0.2 to 0.5	0.6	0.86	0.3
New test	percent	50.0 to 60.0	52.28	50.21	56.9
High boiling bases	percent	18.0 to 22.0	25.15	25.46	21.8
Esketol					
Specific gravity at 20°Centigrade	tons/cu.m.	0.825 to 0.835	0.824	0.828	0.823
Boiling limit	Centigrade	70 to 140	68 to 122	68 to 134	68 to 127
Water	percent	Less than 6.0	4.8	5.5	5.2
Methyl-ethyl-keton	percent	60 to 70	76.64	70.74	72.38
Acetonitril	percent	-	6.36	10.33	9.7
Ester	percent	-	3.42	2.52	4.99
Methyl alcohol	percent	-	-	-	-
Egg-shaped briquettes					
Coal-coke powder	percent	Less than 75	73.3	74.4	73.3
Tar	percent	More than 15.0	16.2	14.6	17.8
Water	percent	Less than 10.0	10.5	11.0	8.9
Heating value	Kcal/kg	5,500 to 5,700	5,813	5,791	5,819
Paraffin mass					
Specific gravity at 50°Centigrade	t/cu.m.	Less than 0.950	0.944	0.940	0.941
Water and dust	percent	Less than 1.0	0.07	0.10	0.10
Solidifying temperature	Centigrade	More than +37.0	39.2	39.5	39.6
Paraffin contents at 0°Centigrade	percent	20.0	21.8	22.2	22.9
Solidification point	Centigrade	-	54.9	54.9	54.5
Boiling start	Centigrade	-	293	302	310
Boiling up to 360°Centigrade	vol.%	-	26.0	25.3	22.5
Gas oil from tar processing					
Combustion point	Centigrade	More than +50	94	99	62
Boiling start	Centigrade	-	228	215	197
Boiling end at 95° Centigrade	vol.%	Less than 350	342	344	345.5
Solidification point	Centigrade	So.:0 Wi.:-5.0	-5.2	-5.0	-3.0

Approved For Release 2007/06/22 : CIA-RDP80-00810A005300650011-3

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25X

Item	Unit	Tech. Spec. 1954	Average Values 1st quarter 1954	2nd quarter 1954	2nd quarter 1953
Creosote	vol.%	Less than 25.0	20.9	20.0	21.05
Water	percent	Less than 0.5	0.3	0.4	0.45
Specific gravity at 20° Centigrade	t/cu.m.	Less than 0.955	0.941	0.942	0.946
Electrode coke					
Water	percent	Less than 0.3	0.07	0.07	0.10
Ashes	percent	1.5	2.08	1.47	1.77
Combustible material	percent	-	97.85	98.46	98.13
Sulfur	percent	Less than 1.5	1.13	2.83	1.36
Volatile material	percent	Less than 1.5	0.88	1.17	0.93
Heating value	Kcal/kg	-	7,836	7,886	7,841
Elementary Analysis of Electrode Coke					
Carbon	percent	-	94.48	94.71	94.64
Hydrogen	percent	-	0.81	0.51	0.77
Sulfur	percent	-	1.13	2.70	1.36
Oxygen & nitrogen	percent	-	1.43	0.54	1.03
Ashes	percent	-	2.08	1.47	1.77
Water	percent	-	0.08	0.07	0.10
Distillation gas					
Final benzine content	g/normal cu.m.	-	7.1	8.1	7.25
Elementary Analysis of Distillation Gas					
H_2S	percent	-	2.18	2.25	2.25
CO_2	percent	-	17.05	17.06	16.63
H_2CS_3	percent	-	0.95	0.85	0.85
Oxygen	percent	-	0.28	0.27	0.25
CO	percent	-	13.08	13.51	13.68
Hydrogen	percent	-	12.65	12.86	14.50
Methane	percent	-	8.07	7.98	8.11
Nitrogen	percent	-	45.73	45.22	43.73
Heating value	Kcal/kg	-	1,755	1,757	1,815
Density	g/liter	-	1.198	1.196	1.173

25X

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